

## DEFAULT ROUTE CODING

## ABSTRACT OF THE DISCLOSURE

A multi-level lookup table includes a plurality of search levels with each search level including a plurality of subtrees, each subtree representing a plurality of nodes. A search of the multi-level lookup table for an entry corresponding to a search key results in a value stored in an entry associated with the node in a subtree. A default value is associated with the root of the subtree. Multiple entries for the subtree can store the default value. To minimize route update time, the default value associated with the subtree is stored in a single location. Instead of storing the default value in multiple entries, each entry stores a use default indicator to indicate that the default value stored in the single location is to be used. To further reduce the number of locations to modify to update the default route, the single location can store an inherit indicator to indicate that the default value for the subtree is inherited from another subtree.